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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,706	01/24/2002	Michael Kozhukh	042390P11082	8988

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EXAMINER

NGUYEN, HUNG

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/057,706	Applicant(s) KOZHUKH, MICHAEL	
	Examiner Hung Henry V Nguyen	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Response filed 3/3/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 26-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I (claims 1-25) in Paper No. March 3, 2004 is acknowledged.

Drawings

2. Figures 1 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 2, the recitation of "each configurable pixel may be configured" renders the claim indefinite. It has been held that the recitation that an element "may be" provided/constructed for performing a function is not a positive limitation and it does not constitute a limitation in any patentable sense.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-3 and 23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sandstrom (U.S.Pat. 6,285,488).

With respect to claims 1-2, 23-24, Sandstrom discloses a lithography system and corresponding method comprising all basic features of the instant claims including: a computer-controlled reticle (30) such as a reflective liquid crystal display (see col.4, lines 28-30; lines 65-67) and comprises an array of configurable pixels (see col.5, lines 8-10) configured to reflect or absorb incident radiation from the radiation source; a radiation source (10) for directing radiation onto the reflective liquid crystal display; a projection lens (40) for reducing a radiation pattern reflected by the reflective liquid crystal display and projecting the reduced radiation pattern onto a workpiece, and a stage (95) for holding the workpiece (60).

As to claims 3 and 25, Sandstrom further teaches the radiation light source being a pulse laser or electromagnetic radiation.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandstrom (U.S.Pat. 6,285,488) in view of Mori et al (U.S.Pat. 5,359,441).

With respect to claims 4-22, Sandstrom discloses a lithography system comprising substantially all of the limitations of the instant claims as discussed above. Sandstrom does not expressly disclose the reflective liquid crystal display having specific structures as cited in the instant claims such as: "at least one front electro connected to a front substrate....and the rear substrate". Mori et al discloses a reflective liquid crystal display having at least one front electrode (27) connected to a front substrate (23) and at least one rear electrode (29) connected to a rear substrate (24) and a liquid crystal layer (25) interposed between the front substrate and the rear substrate (see figure 1) wherein the front electrode, the front substrate and the rear substrate are generally transparent to the radiation emitted by a radiation source (see col.2, lines 39-43). Mori further teaches a reflective liquid crystal display having a plurality of reflective rear electrode connected to an integrated gate transistor structures formed on a rear substrate, wherein electrode through substrate addressing is used to selectively apply voltage to each rear electrode (see figure 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the reflective liquid crystal display as taught by Mori into the lithography system of Sandstrom for the purpose of generating pixel patterns corresponding to

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the predetermined patterns that can be projected onto the substrate and thus reducing the operation cost of the lithography system.

Prior Art Made of Record

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mei et al (U.S.Pat. 6,509,955); and Sandstrom et al (U.S.Pat. 6,624,880), each of which discloses a lithography system wherein a liquid crystal display is used to generate pixel patterns.

Gogna et al (U.S.Pat. 6,023,309), Kim et al (U.S.Pat. 5,486,485) and Yoshida et al (U.S.Pat. 6,642,984), each of which discloses a reflective liquid crystal display having substantially all of the limitation as recited in the claims of the present invention.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn
4/11/04



HENRY HUNG NGUYEN
PRIMARY EXAMINER